LISTING OF CLAIMS

Claim 1 (currently amended): A stent ~~for holding open a blood vessel~~ formed of a plurality of triangular cells, each triangular cell comprising:

a first loop containing section, the first loop containing section arranged generally in the circumferential direction,

a second loop containing section, the second loop containing section arranged generally in the circumferential direction and joined to the first loop containing section at a first junction; and

a third loop containing section joined to the first loop containing section at a second junction and joined to the second loop containing section at a third junction;

wherein a plurality of first loop containing sections form a first band of loops and a plurality of second and third loop containing sections form a second band of loops, the first and second bands alternating along the longitudinal axis of the stent; and

wherein the first, second, and third loop containing sections include legs, and at least one of the legs in any one of the loop containing sections is shorter than at least one other leg in the same loop containing section within the triangular cell, wherein each leg changes its orientation upon expansion.

Claim 2 (original): A stent according to claim 1, wherein the first loop containing section is relatively adapted to enable radial support, and the second and third loop containing sections are relatively adapted to enable longitudinal flexibility.

Claim 3 (previously amended): A stent according to claims 1 or 2, wherein the first loop containing section has wider legs than the second and third loop containing sections.

Claim 4 (previously amended): A stent according to claim 3, wherein the first loop containing section has three loops.

Claim 5 (original): A stent according to claim 4, wherein the second loop containing section has two loops.

Claim 6 (original): A stent according to claim 5, wherein the third loop containing section has two loops.

Claims 7-8 (canceled)

Claim 9 (previously amended) A stent according to claims 1 or 5, wherein the second and first junctions are circumferentially aligned.

Claim 10 (original) A stent according to claims 1 or 2, wherein each cell in the stent encompasses the same area.

Claim 11 (original) A stent according to claims 1 or 2, wherein the cell is arranged so that when expanded a length of the cell along a circumference of the stent is longer than a length of a cell along the longitudinal axis of the stent.

Claims 12-19 (withdrawn)

Claim 20 (original) A stent according to claims 1 or 2, wherein the stent is finished in one of the following ways: plating with a radiopaque material, plating with a protective material, embedding with medicine, or covering with a material.

Claim 21 (currently amended) A stent for widening a vessel in the human body comprising:

a plurality of first meander patterns;

a plurality of second meander patterns intertwined with the first meander patterns to form triangular cells, each of said triangular cells having at least one loop containing section arranged generally in the circumferential direction, the loop containing section having legs, wherein at least one of the legs of the loop containing section is shorter than at least one other leg in the same loop containing section within the triangular cell and the first meander patterns are joined together through the second meander patterns, wherein each leg changes its orientation upon expansion.

Claim 22 (original): A stent according to claim 21 wherein the first meander patterns are comprised of:

even first meander patterns; and

odd first meander patterns which are 180° out of phase with the even first meander patterns, the odd first meander patterns occurring between every two even first meander patterns.

Claim 23 (original): A stent according to claims 21 or 22 wherein the second meander patterns are comprised of:

even second meander patterns; and

odd second meander patterns occurring between every two even second meander patterns.

Claim 24 (original): A stent according to claim 21, wherein each of the triangular cells is comprised of a first loop containing section, a second loop containing section, and a third loop containing section.

Claim 25 (original): A stent according to claim 24, wherein the first loop containing section is formed by a portion of a first meander pattern and the second and third loop containing sections are formed by portions of one or more second meander patterns.

Claim 26 (cancelled):

Claim 27 (previously amended): A stent according to claim 24, wherein the first loop containing section has wider legs than the second and third loop containing sections.

Claim 28 (previously amended): A stent according to claim 21, wherein the first meander pattern has three loops per cell.

Claim 29 (previously amended): A stent according to claim 23, wherein the second meander patterns comprise at least four loops per cell.

Claim 30 (previously amended): A stent according to claim 24 wherein the first and second meander patterns have center lines that are substantially orthogonal.

Claim 31 (original): A stent according to claim 24, wherein the first loop containing section has two loops facing toward the interior of the cell.

Claim 32 (previously amended): A stent according to claim 24, wherein the second and third loop containing sections each have two loops.

Claim 33 (original): A stent according to claims 24, 28 or 32, wherein the loops of the second and third loop containing sections are adapted to compensate for the tendency of the loops of the first loop containing section to foreshorten when the stent is expanded.

Claim 34 (cancelled)

Claim 35 (original) A stent according to claims 24, 28 or 32, wherein the odd and even second meander portions have portions in common wherein said meanders run in the same direction.

Claim 36 (original) A stent according to claims 24, 28 or 32, wherein the first and second meander patterns have portions in common wherein said meander patterns run in the same direction.

Claim 37 (currently amended) A multicellular stent for holding open a lumen, comprising:

a plurality of even and odd vertical meander patterns, the odd vertical meander patterns being located between every two even vertical meander patterns and being out of phase with the even vertical meander patterns,

a plurality of even and odd horizontal meander patterns, the odd horizontal meander patterns being located between every two even horizontal meander patterns,

the vertical meander patterns are intertwined with the horizontal meander patterns to form a plurality of triangular cells, each of the triangular cells having at least one loop containing section arranged generally in the circumferential direction, the loop containing section having legs, wherein at least one of the legs in the loop containing section is shorter than at least one other leg in the same loop containing section within the triangular cell, wherein each leg changes its orientation upon expansion.

Claim 38 (original): A multicellular stent according to claim 37, wherein the triangular cells are formed by a first loop containing section, a second loop containing section connected to the first loop containing section, and a third loop containing section connected to the first and second loop containing section.

Claim 39 (original): A multicellular stent according to claim 38, wherein the first loop containing section is formed from a portion of a vertical meander pattern.

Claim 40 (original): A multicellular stent according to claim 39, wherein the second and third loop containing sections are formed from portions of one or more horizontal meander patterns.

Claim 41 (previously amended): A multicellular stent according to claim 40, wherein members forming the first loop containing section have wider legs than members forming the second and third loop containing sections.

Claim 42 (previously amended): A multicellular stent according to claim 41, wherein the first loop containing section forms at least two loops facing toward the interior of the cell.

Claim 43 (previously amended): A multicellular stent according to claim 42, wherein the second loop containing section forms at least one loop facing toward the interior of the cell.

Claim 44 (original): A multicellular stent according to claim 43, wherein the third loop containing section forms one loop facing toward the interior of the cell.

Claim 45 (cancelled)

Claim 46 (original): A multicellular stent according to claim 45, wherein the first loop containing section includes one free loop.

Claim 47 (cancelled):

Claim 48 (previously amended): A multicellular stent according to claim 37, wherein the length of the second loop containing section is equal to the length of the third loop containing section.

Claim 49 (previously amended): A multicellular stent according to claim 48, wherein each triangular cell of the stent encompasses about the same area.

Claim 50 (original): A multicellular stent according to claim 49, wherein the width of members forming the second loop containing section and the width of members forming the third loop containing section are the same.

Claim 51-66 (withdrawn)

Claim 67 (currently amended) An expandable stent comprising a plurality of enclosed flexible spaces, each of the plurality of enclosed flexible spaces delineated by a plurality of triangular cells, each triangular cell including:

a) a first member having a first end and a second end;

b) a second member having a first end and a second end;

c) a third member having a first end and a second end;

d) a fourth member having a first end and a second end; the first end of the first member communicating with the first end of the second member, the second end of the second member communicating with the second end of the third member, and the first end of the third member communicating with the first end of the fourth member;

e) the first member and the second member with the curved portion at their ends forming a first loop;

f) the third member and the fourth member with the curved portion at their ends forming a second loop;

g) a fifth member having a first end and a second end;

h) a sixth member having a first end and a second end;

i) a seventh member having a first end and a second end;

j) an eighth member having a first end and a second end;

k) a ninth member having a first end and a second end; and

l) a tenth member having a first end and a second end, the first end of the fifth member coupled to the second end of the first member, the second end of the fifth member communicating with the second end of the sixth member, the first end of the sixth member communicating with the first end of the seventh member, the second end of the seventh member communicating with the second end of the eighth member, the

first end of the eighth member communicating with the first end of the ninth member, the second end of the ninth member communicating with the second end of the tenth member, and the first end of the of the tenth member coupled to the second end of the fourth member;

m) the fifth member and the sixth member with the curved portion at their ends forming a third loop;

n) the seventh member and the eighth member with the curved portion at their ends forming a fourth loop; and

o) the ninth member and the tenth member with the curved portion at their ends forming a fifth loop, such that the first and the fourth members are joined together through the fifth, the sixth, the seventh, the eighth, the ninth and the tenth members without connection directly between first and fourth members, and at least one of the members has a length that is shorter than one other member within the triangular cell, wherein each leg changes its orientation upon expansion.

Claim 68 (original): The stent of claim 67, wherein the first member, the third member, the sixth member, the eighth member, and the tenth member have substantially the same angular orientation to the longitudinal axis of the stent and the second member, the fourth member, the fifth member, the seventh member, and the ninth member have substantially the same angular orientation to the longitudinal axis of the stent.

Claim 69 (original): The stent of claim 67, wherein at least one of the members in at least one of the plurality of spaces has a length that is greater than the length of the other members in that space.

Claim 70 (original): The stent of claim 67, wherein at least one of the first, second, third, and fourth members in at least one of the plurality of spaces has a length that is longer than the length of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 71 (original): The stent of claim 70, wherein at least one of the first, second, third, and fourth members in at least one of the plurality of spaces has a length that is about twice the length of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 72 (original): The stent of claim 67, wherein at least one of the first, second, third and fourth members in at least one of the plurality of spaces has a length that is substantially equal to the length of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 73 (original): The stent of claim 67, wherein the first, second, third, and fourth members in at least one of the plurality of spaces have a width that is different than the width of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 74 (original): The stent of claim 73, wherein the first, second, third, and fourth members in at least one of the plurality of spaces have a width that is greater than the width of the fifth, sixth, seventh, eighth, ninth, and tenth members in that space.

Claim 75 (original): The stent of claim 67, wherein at least one member in at least one of the plurality of spaces has a width that is greater than the other members in that space.

Claim 76 (canceled)

Claim 77 (previously amended) The stent of claim 69, wherein at least the member having the greatest length in the space is joined to an adjacent member which extends in an adjacent space.

Claim 78 (original) The stent of claim 67, wherein a substantial portion of each of the members is substantially straight.

Claim 79 (original) The stent of claim 67, wherein the members are comprised of metal.

Claim 80 (cancelled)

Claim 81 (original): The stent of claim 67, wherein the first, second, third, and fourth members and the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different flexibilities with respect to each other.

Claim 82 (original): The stent of claim 81, wherein the first, second, third, and fourth members are more flexible than the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 83 (original): The stent of claims 81, wherein the fifth, sixth, seventh, eight, ninth, and tenth member patterns are more flexible than the first, second, third, and fourth members.

Claim 84 (original): The stent of claim 67, wherein at least one portion of at least one of the first, second, third, and fourth members and at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different flexibilities with respect to each other.

Claim 85 (original): The stent of claim 84, wherein at least one portion of at least one of the first, second, third, and fourth members is provided with at least one portion that is more flexible than at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 86 (original): The stent of claim 84, wherein at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members is provided with at least one portion that is more flexible than at least one portion of at least one of the first, second, third, and fourth members .

Claim 87 (original): The stent of claim 67, wherein the first, second, third, and fourth members and the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different resistances to radial compression with respect to each other.

Claim 88 (original): The stent of claim 87, wherein the first, second, third, and fourth members have a greater resistance to radial compression than the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 89 (original): The stent of claims 87, wherein the fifth, sixth, seventh, eighth, ninth, and tenth members have a greater resistance to radial compression than the first, second, third, and fourth members.

Claim 90 (original): The stent of claim 67, wherein at least one portion of at least one of the first, second, third, and fourth members and at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members are provided with different resistances to radial compression with respect to each other.

Claim 91 (original): The stent of claim 90, wherein at least one portion of at least one of the plurality of the first, second, third, and fourth members is provided with at least one portion that has a greater resistance to radial compression than at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members.

Claim 92 (original): The stent of claim 90, wherein at least one portion of at least one of the fifth, sixth, seventh, eighth, ninth, and tenth members is provided with at least one portion that has a greater resistance to radial compression than at least one portion of at least one of the first, second, third and fourth members.

Claim 93-94 (cancelled)

Claim 95 (currently amended): A stent ~~for holding open a blood vessel~~ formed of a plurality of triangular cells, each triangular cell comprising:

a first loop containing section, the first loop containing section arranged generally in the circumferential direction, the loops in said first loop containing section occurring at a first frequency;

a second loop containing section, the second loop containing section arranged generally in the circumferential direction, the loops in said second loop containing section occurring at a second frequency; and

a third loop containing section, the loops in said third loop containing section also occurring at a second frequency that is higher than said first frequency, said third loop containing section joined to said first and second loop containing sections such that a plurality of first loop containing sections are joined together through the second and third loop containing sections without connection directly between the first loop containing sections;

wherein loop containing sections include legs, and at least one of said legs in any one of the loop containing sections is shorter than at least one other leg in the same loop containing section within the triangular cell, wherein each leg changes its orientation upon expansion.

Claim 96 (previously amended): A stent according to claim 95, wherein the first loop containing section is relatively adapted to enable radial support and the second and third loop containing sections are relatively adapted to enable longitudinal flexibility.

Claim 97 (previously amended): A stent according to claim 95, wherein the first loop containing sections have wider legs than the second and third loop containing sections.

Claim 98 (previously amended): A stent according to claim 95, wherein the first loop containing section has two loops for every three loops combined of said second and third loop containing sections.

Claim 99 (previously amended): A stent according to claim 95, wherein the loops in the second and third loop containing sections provide improved flexibility.

Claim 100 (previously amended): A stent according to claim 99, wherein, while flexing, loops in the second and third loop containing sections have maximal strain of the expanded stent within a blood vessel that is lower than the elastic limit of the material of the stent.

Claim 101 (previously amended): A stent according to claim 95, wherein the first loop containing sections are 180 degrees out of phase with each other.

Claim 102 (previously amended): A stent according to any of claim 101, wherein the first loop containing section is joined to said second and third loop containing sections such as to form a plurality of cells, each of which include two loops of said first loop containing section and three loops of said second and third loop containing sections combined.

Claim 103 (cancelled)

Claim 104 (original): A stent according to claim 95, wherein substantially each cell in the stent encompasses the same area.

Claim 105 (original): A stent according to claim 95, wherein the cell is arranged so that when expanded a length of the cell along a circumference of the stent is longer than a length of a cell along the longitudinal axis of the stent.

Claims 106-107 (withdrawn)

Claim 108 (currently amended): A stent for widening a vessel in the human body formed of a plurality of triangular cells comprising:

a plurality of first circumferential bands consisting essentially of a basically sinusoidal pattern of loops at a first frequency,

a plurality of second circumferential bands consisting essentially of a basically sinusoidal pattern of loops at a second frequency higher than said first frequency,

alternating with said first circumferential bands and periodically coupled thereto to form the triangular cells ;

wherein the circumferential bands have legs and at least one leg of one of the circumferential band is shorter than another leg of the same circumferential band within a triangular cell, wherein each leg changes its orientation upon expansion.

Claim 109 (original):A stent according to claim 108 wherein the first circumferential bands containing a pattern of loops are comprised of

even first circumferential bands containing a pattern of loops; and

odd first circumferential bands containing a pattern of loops which are 180° out of phase with the loops of the even first circumferential bands, an odd first circumferential band occurring between every two even first circumferential bands.

Claim 110 (previously amended): A stent according to claim 108, wherein each cell includes two loops of one of said plurality of first circumferential bands and three loops of one of said plurality of second circumferential bands.

Claim 111 (original):A stent according to claim 108, wherein each cell includes a number of loops of said first circumferential band corresponding to two cycles of said first frequency and a number of loops of said second circumferential band corresponding to three cycles of said second frequency.

Claim 112 (previously amended): A stent according to claim 108, wherein the first circumferential bands have loops with legs that are wider than the legs in the loops in said second circumferential bands.

Claim 113 (previously amended): A stent according to claim 112, wherein the higher frequency of the loops in said second circumferential bands provide improved flexibility.

Claim 114 (previously amended): A stent according to claim 113, wherein, while flexing, elements in the higher frequency loops have maximal strain that is lower than the elastic limit of the material of the stent.

Claim 115 (cancelled)

Claim 116 (previously amended): A stent according to claim 108, wherein the first circumferential bands have loops forming two cycles per cell.

Claim 117 (previously amended): A stent according to claim 108, wherein the second circumferential bands have loops forming three cycles per cell.

Claim 118 (original):The stent of claim 95 wherein said stent is self-expanding.

Claim 119 (original):The stent of claim 95 wherein said stent is balloon expanded.

Claims 120-121 (cancelled)

Claim 122 (previously amended): A stent according to claims 21 or 22, wherein the second meander patterns consist essentially of even second meander patterns.

Claim 123-124 (cancelled)

Claim 125 (previously added): A stent according to claim 100, wherein the stent is exposed to repeated flexing of a vessel caused by the systolic cycle in a coronary artery.

Claims 126-129 (cancelled)